Program

Of the 2nd Field Robot Event, 2004

Thursday June 17
Friday June 18

- A case study or project of seven credits. The study is aimed at application of all acquired knowledge and skills from the MSc training including the above in a 'real-life' situation. That is on a real-life case needing the application of several expertise fields, carried out in a multidisciplinary team; teams will be constituted from students of different studies, cases are identified and commissioned by an external employer form e.g. a small manufacturing company, industry, research institute or a (non-) governmental organization.

Internship
The internship is an important part in which the student can apply its obtained knowledge in a work environment that is similar to the professional practice. Besides, a student also learns the consequences of working together with colleagues and the difference between theory and practice. When the internship is done abroad a student also learns how to deal with other cultures and he or she can learn or improve a foreign language. Approximately half of the students of Agricultural and Bioresource Engineering are doing their internship abroad.

Thesis
All students have to do a thesis which is the climax of the study. They have to select one of the following different theses:
- Systems and control
- Information technology
- Farm technology
- Environmental engineering
- Soil technology

The thesis consists of doing independently research or a part of a research in which the knowledge and the skills gained in the BSc study, the MSc courses and the academic master cluster are being applied. The objective of a thesis is doing scientific research in all its faces and aspects.
The different aspects of a thesis are:
- Search, analyze and evaluate the available literature and other information in relation to the problem.
- Plan lab experiments and / or steps to develop and test a mathematical model.
- Individually doing lab experiments and / or developing and testing mathematical models.
- Analyzing and evaluating own research results, including the critical comparison with literature and results of thirds.
- Giving one or more oral presentations and writing a scientific report.
- In most cases, following chair group colloquia.

Depending on the subject the different aspects can be of more or less importance.

Contest Information

Jury members
- Prof. Dr. J. de Baerdemaker
  Leuven University, Belgium
- Prof. Dr. S. Blackmore
  KLV Copenhagen, Denmark
- Dr. ir. D. Goense
  A & F, Wageningen UR
- Prof. Dr. J. Müller
  Wageningen University
- Prof. Dr. ir. G. v. Straten
  Wageningen University

Jury Criteria:
Final mark consists of 3 elements:
- Field performance (75%)
- Paper for Proceedings (15%)
- Investment (10%)

Field Performance:
Field performance of the robots is evaluated by 3 mandatory tasks:

Task 1: Make as many rows as possible in 2 minutes (**straight** rows, 10 m long, 12 rows are available)

Task 2: Make as many rows as possible in 2 minutes (**curved** rows, 30 m long, 12 rows available).

Task 3: Make as many rows as possible in 2 minutes (straight rows with **wet** (saturated) soil, 10 m long, 12 rows are available)

Jury assistants are measuring the distance, which is mastered by the Field Robot during the given time. If a Field Robot is mastering all available rows in less than the given time, required time is measured. Based on the total time/distance ranking, the robots will get (26-rank) points per task, i.e. a maximum of 25 points can be earned by each of the 3 tasks.

The Jury will judge the working style of the Field Robots in terms of:
- Crop damage
- Missing rows
- Smoothness of action

Points 1 (poor) to 5 (excellent) are indicated by each of the 5 Jury member by rising a number card when all three tasks are solved.

In total max 100 points can be earned from field performance, calculated as:
- distance ranking: max 3 x 25=75 points
- style points: max 5 x 5 (Jury members) = 25 points

Proceedings:
After the event "Proceedings of the 2nd Field Robot Event 2004" will be published. The teams have been encouraged to prepare a paper and fill in a standard form about specifications of their robot.

A total of 30 points can be earned on this element.

Investment:
As there are no restrictions in how to construct the robots, the investment of the Field Robots are taken into consideration. The costs are declared by the teams themselves in a table of specifications that is submitted before the contest and printed in a program book. Points will be assigned to cost categories.

A maximum of 20 points can be earned on this element.

Final ranking
The points from field performance, proceeding paper and investment are multiplied by factors to reach the relation 75% / 15% / 10%:

Field performance x 1.5 + Proceedings + Costs = Max. 200 points.

Map of Wageningen